

# UNION RADIO-SCIENTIFIQUE INTERNATIONALE INTERNATIONAL UNION OF RADIO SCIENCE

U. I. C. C.

PR 1 1975

LIBRARY



**INFORMATION**

**BULLETIN**

**D'INFORMATION**

**CUMULATIVE INDEX**

N° 148 (1965) - N° 189 (1973)

Publié avec l'aide financière de l'UNESCO par le Secrétaire Général de l'URSI

Place Émile Danco, 7 - 1180 Bruxelles

(Belgique)

UNESCO Subvention 1974 - No DG/2-1/414/38



# URSI INFORMATION BULLETIN

## Cumulative Index No. 148 (1965) - No. 189 (1973)

Each reference indicates the serial number (in bold type) of the Bulletin followed by the page number. When both English and French texts have appeared, only the reference to the English text is given. The year of publication is not shown in the index but can be found from the Table below.

	1965	1966	1967			
Jan.-Feb.	148	154	160			
Mar.-Apr.	149	155	161			
May-June	150	156	162			
July-Aug.	151	157	163			
Sept.-Oct.	152	158	164			
Nov.-Dec.	153	159	165			
	1968	1969	1970	1971	1972	1973
March	166	170	174	178	182	186
June	167	171	175	179	183	187
Sept.	168	172	176	180	184	188
Dec.	169	173	177	181	185	189



- Abstracting Board, ICSU  
Activities 1965, **156**, 28.  
Meeting, July 1968, **168**, 42.  
Publications, **153**, 79; **176**, 65; **182**, 34.  
Recommendations, **155**, 65; **172**, 101.  
Report 1970, **177**, 24.
- Airglow, Pre-dawn Project (C. M. Minnis), **159**, 51.
- Alouette (see Satellite).
- Antennas and Arrays (G. Sinclair), **185**, 14.
- Appleton, E. V.  
Commemoration plans, **157**, 6.  
ITU portrait, **155**, 66.  
Prize (Royal Society) (see Awards).  
Tromsö Journal (C. M. Minnis and L. Harang) **158**, 35.
- Assembly, URSI General  
XIV (Tokyo 1963)  
Proceedings, **148**, 18; **150**, 7.  
*Progress in Radio Science 1960-63*, **149**, 33; **151**, 6; **152**, 10; **154**, 9; **155**, 5.
- XV (Munich 1966)  
Announcements, **149**, 23; **151**, 7; **152**, 3.  
National Reports, **150**, 13.  
Proceedings, **160**, 6; **167**, 106.  
Programme, **157**, 7.  
Programme Commissions I, IVa, **153**, 3.  
Programme Commission VI, **154**, 5.  
*Progress in Radio Science 1963-66*, **162**, 69.  
Report of WMO, **162**, 67.  
Report to ICSU (R. L. Smith-Rose), **158**, 32.  
Resolutions, **158**, 21.  
Resolutions Commission III, **159**, 20.  
Summary Report, **158**, 6.
- XVI (Ottawa 1969)  
Programme, General, **162**, 5; **167**, 19.  
Programme, Commission VI, **164**, 24.  
Resolutions, **172**, 47.  
Resolutions (correction Res. VIII. 1), **173**, 3.  
Scientific Programme, **167**, 25; **171**, 4.
- XVII (Warsaw 1972)  
Announcements, **180**, 5; **182**, 22.  
Elections, **184**, 3.  
Report Commission III, **186**, 8.  
Resolutions, **184**, 6; **186**, 5.  
Highlights Commission VI, **185**, 8.  
Working Groups Commission III, **186**, 13.  
Miscellaneous  
General Policy (H. G. Booker, S. Silver), **162**, 5.  
What is a General Assembly? (C. M. Minnis), **170**, 12.



XVIII (Lima 1975)

Location, **187**, 3.

Timetable, **189**, 3.

Atmosphere, COSPAR International Reference (CIRA 1965), **155**, 63.

Aurora, Nomenclature of radio, **168**, 24.

Awards, URSI

Announcements 1969, **166**, 3; **171**, 4.

Announcements 1972, **183**, 15.

Rules, Appleton Prize, **175**, 14.

Rules, Gold Medals, **175**, 12.

Axford, W. I. (see Plasmopause and Solar Wind).

Bailey, A. E. (see Commissions — Letters, etc. : Commission I).

Beckmann, B. (see IUWDS — Regional Warning Centres : Darmstadt).

Berkner, L. V., NASA Award, **159**, 4.

Beynon, W. J. G. (see IQSY : Post-IQSY Plans).

Bibl, K. (see Data Processing).

Board of Officers, URSI

Meetings

March 1965, **149**, 13.

February 1967, **161**, 10.

July 1967, **164**, 44.

March 1968, **167**, 16.

March 1969, **171**, 16.

February 1970, **174**, 86.

November 1970, **178**, 3.

April 1971, **179**, 12.

March 1972, **183**, 3.

March 1973, **186**, 19.

Membership

1969-72, **172**, 5.

March 1972, **182**, 34.

December 1972, **185**, 40.

Statement on Reorganisation (1970), **178**, 14.

Booker, H. G. (see Assembly, URSI General — Miscellaneous : General Policy).

Bossy, L. (see Digital Ionosonde, Dourbes).

Broadcasts, Solar-geophysical information (WWV/WWVH), **164**, 37; **168**, 31; **180**, 31.

*Bulletin signalétique*, **182**, 33.

Bureau International de l'Heure

Directing Committee (March 1967), **163**, 54.

Publications, **150**, 28; **168**, 52.

Reports, **158**, 57; **165**, 54.

Calendar, International Geophysical

1965, **150**, 53.

- 1966 English and Spanish, **152**, 30; **155**, 7.  
1967 English and Spanish, **158**, 51; **159**, 63.  
1968, **164**, 30.  
1969, **169**, 40.  
1970, **173**, 30.  
1971, **177**, 18.  
1972, **181**, 27.  
1973, **185**, 18.  
1974, **189**, 31.

Scientific Programmes (A. H. Shapley), **177**, 13.

Calendar Records of Events (IGY-IQSY), **170**, 58.

Carlson, H. C. (see Ionosphere : Conjugate points effects).

Castel, du F. (see Ionosphere : Incoherent scatter process, discovery).

## CCIR

Letter from Director, **159**, 73.

List of symbols, **162**, 56.

Relations with URSI, **162**, 39; **164**, 26; **166**, 11; **169**, 26; **173**, 19.

### Study Groups

1965, **151**, 93; **152**, 101.

1966, **162**, 48.

1968, (IUCAF), **170**, 30.

1970, **176**, 61.

Plenary Assembly 1966, **156**, 30; **162**, 54.

### URSI Documents 1968

Ducting in F layer, **167**, 60.

Fading of signals, **167**, 99; **169**, 27.

Ionospheric data, **167**, 64.

Plasmas : communications with spacecraft, **171**, 39.

Propagation in troposphere, **167**, 55.

Radio meteorology, **167**, 57.

Radio noise in ionosphere, **167**, 91.

Radio refractive index, **167**, 57.

Sporadic E, **167**, 84.

Time signals, **167**, 102.

Chapman, S., Hodgkins Prize, **154**, 44.

## CIG

Meeting, April 1965, **148**, 46; **150**, 73.

Future of CIG, **153**, 75.

## Commissions of URSI

### Official Members

Full lists and corrections

November 1967, **165**, 7.

May 1968, **167**, 49.

September 1970, **175**, 10; **176**, 73.

March 1971, **177**, 3; **178**, 67.

September 1971, **180**, 32.

March 1972, **182**, 41.  
December 1972, **185**, 46.  
June 1973, **187**, 17.  
November 1973, **189**, 39.

#### Partial lists

Belgium, **155**, 7.  
Canada, **151**, 10; **160**, 7.  
China, **150**, 26.  
Czechoslovakia, **152**, 12.  
Denmark, **151**, 10.  
France, **149**, 36; **156**, 5.  
Germany, **149**, 45; **153**, 10.  
Greece, **153**, 11.  
Israel, **160**, 7.  
Japan, **159**, 38  
Mexico, **1434**.  
New Zealand, **149**, 52.  
Switzerland, **159**, 40.  
USA, **148**, 5.  
Yugoslavia, **156**, 8.

Chairmen and Vice-Chairmen (1969-72), **172**, 5.

Commission IV, **149**, 62.

Commission VIII, **161**, 61.

Letters, etc.

A. E. Bailey, Commission I, **185**, 3.

Chairman, Commission II, **185**, 6.

Chairman, Commission VI, **148**, 30; **189**, 15.

Chairman, Commission VII, **188**, 14.

New Results Commission VIII (R. Rivault), **185**, 16.

Highlights (1969-72) Commission VI, **185**, 8.

Present and future of Commission I (P. O. Lundbom), **189**, 7.

Future Activities of Commission II (F. Eklund), **189**, 13.

#### Committees (URSI)

##### URSI-CIG Meetings

March 1965, **151**, 32.

September 1966, **159**, 32; **160**, 31.

July 1967, **166**, 12.

##### URSI-Space Research

Letter from Chairman, **148**, 34.

Terms of Reference, **168**, 4.

Membership, June 1971, **178**, 38.

##### URSI-STP

Formation, membership, **166**, 16; **170**, 21.

Membership, 1965, **174**, 59.

Minutes September 1968, **169**, 48.

Minutes August 1969, **174**, 35.

Minutes July 1971, **181**, 28.

Minutes August 1972, **187**, 11.



Working Group on Digital Data, May 1970, **178**, 52.

New Terms of Reference 1973, **186**, 23.

## CODATA

Board Members, **158**, 68.

First Meeting 1966, **161**, 85.

URSI Representative, **156**, 27.

Coulomb, J. (see International Scientific Cooperation).

Courses, Electromagnetic Science (Boulder), **174**, 81.

## COSPAR

### Meetings

VII Florence 1964, **148**, 64, 80.

VIII Mar del Plata 1965, **151**, 97; **152**, 81.

IX Vienna 1966, **152**, 83; **157**, 57.

X London 1967, **158**, 63; **164**, 41.

XI Tokyo 1968, **168**, 8.

XII Prague 1969, **172**, 90.

XIII Leningrad 1970, **176**, 42.

XIV Seattle 1971, **178**, 40; **180**, 15.

XV Madrid 1972, **181**, 39; **184**, 88.

XVI Konstanz 1973, **185**, 21; **188**, 17.

Membership, structure, **148**, 78.

### Publications

*Information Bulletin*, **163**, 60.

*Space Research VII*, **163**, 61.

Working Groups (May 1970), **177**, 36.

Customs : Scientific equipment, **148**, 56, 59.

## Data

Guide for exchange, **173**, 30.

Period 6-10 March 1970, **176**, 66.

Storage and retrieval, **177**, 19.

Decaux, B., Election to Académie des Sciences, **155**, 3.

Dellinger Gold Medal (see Awards).

Design, Computer simulation of EM field problems; Optimization in design (R. E. Harrington), **185**, 13.

Dielectric measurements, **156**, 11.

Dieminger, W. (see Ionosphere : Research after IQSY).

Dieminger, W. (see IQSY : Ionosphere).

Diffraction and scattering (L. B. Felsen), **185**, 12.

Digital Ionosonde, Dourbes (L. Bossy), **177**, 11.

Digital recording, **178**, 51.

Digital data, Working Group May 1970 (see URSI-STP).

Doyen, G. (and A. Haubert — see Ionosphere : Wind measurements).

Dynamics of upper atmosphere (C. O. Hines), **176**, 25.

## Eclipse of Sun

November 1966, **152**, 15; **154**, 34.

March 1970, **170**, 57; **178**, 65.

July 1972, **178**, 65.

June 1973, **178**, 65; **180**, 31; **187**, 13.

Eklund, F. (see Commissions : Future activities of Commission II).

Engineering sciences and research : UNESCO Sept. 1970 (C. M. Minnis) **177**, 25.

Environment Problems, ICSU Committee, **176**, 66.

ESSA Research Laboratories, **167**, 53.

## FAGS

Activities of Services, **184**, 96.

Brochure 1966, **161**, 79.

Brochure 1972, **185**, 23.

Council Sept. 1966, **160**, 68.

Report 1964, **151**, 137.

Farley, D. T. (see Incoherent Scatter Studies).

Farley, D. T. (see Incoherent Scatter Mobile Sounder).

Felsen, L. B. (see Diffraction and Scattering).

Ferrié, G., Centenary, **169**, 3; **170**, 5.

Flag, presented by Polish Committee, **187**, 7.

Flares, Associated radio phenomena, **179**, 28.

## Frequency allocations

Radio astronomy, **161**, 58; **171**, 21; **181**, 9; **182**, 26.

Space research, **171**, 21; **183**, 31.

WARC 1971, **181**, 9.

Frequency bands, nomenclature, **174**, 33.

Frequency protection, **155**, 59.

Frequency registration (radio astronomy), **153**, 60; **155**, 49; **161**, 48; **181**, 23.

Frequency standard emissions, **166**, 32; **179**, 17.

## GARP

Objectives, **179**, 29.

Planning conference (March 1970), **175**, 23.

Programme, **173**, 34.

Publications, **177**, 4; **179**, 29; **180**, 32.

Geodynamics Project, **177**, 20.

Geomagnetic indices (see Publications, etc.).

Glacier sounding, **175**, 21.

Gold Medal (see Awards).

Gudmandsen, P. (see Ice, Electromagnetic Studies).

Harang L. (and C. M. Minnis — see Appleton : Tromsø Journal).

Harrington, R. E. (see Design).

Haubert, A. (and G. Doyen — see Ionosphere : Wind measurements).

Hertz (unit of frequency); **161**, 88.

Hines, C. O. (see Dynamics of upper atmosphere).

## IAF

Congress Warsaw 1964, **148**, 99; **151**, 147.

Congress Madrid 1966, **153**, 84.

Congress Belgrade 1967, **160**, 73.

Congress Konstanz 1970, **177**, 32.

Elections, **156**, 31.

## IAGA

Symposia 1967-70, **153**, 83.

New structure 1973, **189**, 25.

## IAU

Assembly Prague 1967, **161**, 84.

Information, **151**, 140.

Ice, Electromagnetic Studies (P. Gudmandsen), **177**, 7.

ICSU and the Unions (S. Silver), **181**, 3.

## ICSU

XI Assembly

Elections, **154**, 42.

Report, **157**, 60.

XII Assembly, **169**, 7.

XIII Assembly, **177**, 29.

XIV Assembly, **184**, 82.

Executive Committee

April 1965, **151**, 115, 127; **152**, 76.

October 1966, **160**, 64; **162**, 57.

October 1969, **174**, 79.

General Committee, Sept. 1973, **189**, 22.

Report to UNESCO 1966, **162**, 57.

Report on progress 1964, **148**, 86.

Report by URSI 1965, **151**, 127.

Report on UNESCO/ICSU Meeting 1964, **148**, 94.

*Review of World Science*, **148**, 97.

Yearbook 1965, **150**, 81.

IGY, Indian Ionospheric Data, **151**, 74.

Incoherent Scatter Mobile Sounder (D. T. Farley), **176**, 7.

Incoherent Scatter Studies (D. T. Farley), **183**, 16.

Incoherent Scatter Process, Discovery (F. du Castel), **188**, 15.

India, Activities of NPL Radio Propagation Unit, **159**, 37.

Indian National Science Academy, **176**, 67.

Indices (ITU), **148**, 24; **149**, 59; **150**, 32; **151**, 20; **152**, 18; **153**, 19; **154**, 17; **155**, 35;  
**156**, 14; **157**, 36; **160**, 23; **161**, 45; **162**, 21; **163**, 34; **164**, 18; **165**, 32.

Interdisciplinary Studies, Cooperation in, **180**, 10.

International Scientific Cooperation (J. Coulomb), **173**, 4.

Ionosonde, solid state, **178**, 63.

Ionosonde, digital, Dourbes (L. Bossy), **177**, 11.

### Ionosphere

Atlas of ionograms (A. H. Shapley), **176**, 62.

Australian Prediction Service, **164**, 4.

Automatic data handling, **160**, 44.

Conjugate point effects (H. C. Carlson), **159**, 52.

Data from Belgrade, **152**, 15.

Data index (*Ann. IGY*), **160**, 48.

Data processing (K. Bibl.), **169**, 32.

Data for WDCs, **160**, 46.

Digital ionosonde, Dourbes (L. Bossy), **177**, 11.

Digital recording, **178**, 51.

Drift analysis (Working Group Oct. 1967), **166**, 18; **167**, 30.

Electron density profiles (J. W. Wright) (Working Group 1964), **151**, 39;  
**152**, 74.

European Scatter Observatory (EISCAT), **182**, 23.

INAG, **173**, 32.

Incoherent Scatter Mobile Sounder (D. T. Farley), **176**, 7.

Incoherent scatter observations, **176**, 9.

Incoherent Scatter Studies (D. T. Farley), **183**, 16.

Incoherent scatter process, discovery (F. du Castel), **188**, 16.

International Reference Ionosphere (K. Rawer), **170**, 62; **179**, 18; **180**, 24.

Ionosonde, solid-state, **178**, 63.

IQSY Working Group, **151**, 34.

Locations for ionosondes (H. U. Widdel), **148**, 52.

Movements, Working Group, **186**, 15.

Network Advisory Group (INAG), **173**, 32.

Research after IQSY (W. Dieminger), **166**, 4.

Storm Project (Nov. 1970), **175**, 20; **177**, 39.

Topside ionograms (nomenclature), **151**, 15.

VI Soundings Network (Meeting Jan. 1969), **174**, 43.

Wind measurements (A. Haubert and G. Doyen), **161**, 42.

Winter anomaly programme, **175**, 21.

### IQSY

Advisory Groups, **148**, 60.

*Annals of IQSY*, **173**, 35; **175**, 32.

III Assembly (Madrid 1965), **148**, 47; **152**, 43.

IV Assembly (London 1967), **153**, 70; **158**, 63.

Bibliography, **152**, 16, 21.

Instruction Manuals, **148**, 57.

Ionosphere (W. Dieminger), **151**, 83.

National programmes, **152**, 52; **154**, 19.

*IQSY Notes*, **148**, 49; **149**, 79; **152**, 52; **153**, 71.

Participating Committees, **153**, 72.

Post-IQSY Plans (W. J. G. Beynon), **152**, 24.

Scientific programme, **151**, 75.



Solar-terrestrial Relations (C. M. Minnis), **151**, 76.

USSR Report on space research, **148**, 64.

IRI (see Ionosphere).

IUCAF (see also Frequency allocation and protection).

COSPAR Resolutions May 1965, **151**, 72.

CCIR Study Group IV 1965, **153**, 32.

CCIR Study Group IV 1968, **170**, 30.

Document IUCAF/88, **156**, 26.

Documents IUCAF/60-/99, **160**, 55.

Letter to radioastronomers 1965, **150**, 56.

V Meeting (Bonn 1965), **149**, 67.

VII meeting (Munich 1966), **159**, 64.

VIII Meeting (Washington 1967) **163**, 41.

IX Meeting (Brussels 1969), **174**, 60.

X Meeting (Göteborg 1970), **176**, 17.

Meeting (Konstanz 1973), **188**, 16.

Membership 1965, **152**, 41.

Names and addresses, **161**, 63.

Report to ICSU April 1965, **151**, 135.

Report to ICSU October 1966, **158**, 49.

IUCRM

Business Meeting Sept. 1967, **166**, 19.

Business Meeting June 1969, **174**, 74.

Business Meeting August 1969, **175**, 25.

IUCSTP

Discussion with UNESCO 1967, **161**, 65.

Formation, **165**, 36.

Meeting (London 1969), **168**, 50; **169**, 5; **171**, 27; **173**, 24.

IUCSTR

Meeting (Belgrade 1966), **155**, 61.

Termination, **158**, 48.

IUGG

Committee on Atmospheric Sciences, **151**, 142; **161**, 80.

XIII Assembly (Berkeley 1963), **149**, 81; **150**, 85; **151**, 145.

XIV Assembly (Switzerland 1967), **154**, 44.

Problems of structure, **178**, 18.

IUPAC

Bureau 1965-67, **152**, 100.

Conference Prague 1967, **157**, 77.

IUWDS

Australia and Antarctic Regional Committee, **171**, 41.

Broadcasts WWV/WWVH, **164**, 37; **168**, 31.

Code Book 1963, **152**, 29.

Code Book 1965, **155**, 42; **156**, 19.

Code Book 1969, **171**, 42.

Codes, **160**, 58.

- Geoalerts, distribution of, **156**, 20.  
Letter from Secretary, **148**, 44.  
Report of activity 1964, **150**, 43.  
Report of activity 1965, **157**, 48.  
Report of activity 1966, **161**, 67; **165**, 57.  
Report of activity 1967, **167**, 41.  
Report of activity 1969, **176**, 52.  
Report of activity 1970, **180**, 27.  
Regional Warning Centres  
Darmstadt (B. Beckmann), **161**, 72.  
General, **151**, 62.  
Meeting 1967, **164**, 29; **167**, 34.  
Sydney, **169**, 43.  
Resolutions 1972, **184**, 41.  
Secretary, change of, **153**, 30.  
Steering Committee 1966, **159**, 58.  
Steering Committee 1967, **167**, 38.  
US Telecommunications and Space Disturbance Centre, **155**, 43.  
West Pacific Regional Committee, **169**, 44; **171**, 41, **180**, 32.  
World Days Programme, **152**, 37.  
Kaplan, J., Hodgkins Prize, **154**, 44.  
Legrand, J. P. (and P. Simon — see Solar flare forecasting).  
Lundbom, P. O. (see Commissions : Present and future of Commission I).  
Magnetograms, rapid run, **176**, 55.  
Magnetosphere, ELF and ULF observational programme, **159**, 46.  
Magnetospheric Study, International, **176**, 45; **180**, 29.  
Mastus, de H. L. (and P. S. McIntosh — see Sunspot observations).  
McIntosh, P. S. (and H. L. de Mastus — see Sunspot observations).  
Measurements at RF, CIPM Working Group 1968, **170**, 25.  
Measurements at RF, CIPM Working Group 1972, **189**, 29.  
Member Committees  
Argentina, Boletin, **153**, 9; **154**, 10.  
Australia, Membership, **157**, 11.  
Australia, Category, **188**, 3.  
Belgium, Membership, **155**, 7.  
Canada, Membership, **151**, 10; **160**, 7; **168**, 20.  
Canada/USA Meeting 1967, **163**, 9.  
China, Republic of, **150**, 26.  
Denmark, addresses, **150**, 23.  
Finland, Convention 1970, **178**, 50.  
Finland, Convention 1973, **189**, 16.  
France, Membership, **149**, 36; **167**, 52.  
Germany, Annual Meeting, **159**, 36.  
Germany, Membership, **149**, 45; **153**, 10; **163**, 7.  
Germany, National Report, **159**, 33.

Greece, Membership, **153**, 10.  
Hungary, Membership, **159**, 37.  
Israel, Membership, **160**, 7; **163**, 7.  
Italy, Membership, **150**, 25.  
Italy, National Report, **159**, 33.  
Japan, Address, **151**, 11.  
Japan, Membership, **161**, 18.  
Mexico, Membership, **148**, 4.  
Netherlands, Membership, **169**, 45.  
New Zealand, Membership, **149**, 52; **164**, 5.  
Nigeria, Membership, **168**, 22.  
South Africa, CSIR 1965-66, **161**, 21.  
South Africa, Reports, **150**, 26.  
Sweden, Activities, **157**, 12.  
Sweden, Membership, **163**, 8.  
Sweden, President, **175**, 10.  
United Arab Republic, Provisional Member, **168**, 20.  
United Kingdom, President, **160**, 8.  
United Kingdom, Address, **163**, 9.  
USA Meeting, Oct. 1964, **148**, 6.  
USA Meeting, Apr. 1965, **148**, 16.  
USA Meeting, Oct. 1965, **151**, 12; **152**, 13.  
USA Meeting, Apr. 1966, **151**, 13; **157**, 13.  
USA Meeting, Dec. 1966, **158**, 46; **161**, 26.  
USA Meeting, Oct. 1967, **162**, 12.  
USA Meeting, May 1967, **163**, 9.  
USA Meeting, Dec. 1969, **172**, 95.  
USA Meeting, Apr. 1970, **174**, 81.  
USA, Membership, **148**, 5; **164**, 5.  
USA, Report to COSPAR, **155**, 13; **155**, 38.  
USSR, Report to COSPAR, **155**, 23.  
Yugoslavia, Membership, **156**, 8.

#### Membership Lists

Sept. 1970, **176**, 67.  
March 1971, **177**, 3; **178**, 67.  
Sept. 1971, **180**, 32.  
March 1972, **182**, 34.  
June 1973, **187**, 16.  
Nov. 1973, **189**, 33.

Minnis, C. M. (see Airglow, Pre-dawn Project).

Minnis, C. M. (see Assembly, URSI General -- Miscellaneous : What is a General Assembly ?).

Minnis C. M. (see Engineering sciences and research : UNESCO Sept. 1970).

Minnis C. M. (see IQSY : Solar-terrestrial Relations).

Minnis, C. M. (see Solar minimum 1964).

Minnis, C. M. (and L. Harang — see Appleton E. V. : Tromsö Journal).

Moon, Inter-Union Commission, **182**, 29.

Surface Study, **156**, 16.

Nicolet, M., Hodgkins Prize, **154**, 44.

#### Obituaries

Albareda, J. M., **156**, 5.

Appleton, E. V., **149**, 5; **150**, 3; **160**, 4.

Berkner, L. V., **162**, 3; **163**, 3; **165**, 27.

Bochenek, K., **160**, 3.

Bureau, R., **149**, 3.

Chapman, S., **176**, 4.

Dorsimont, A., **183**, 3.

Eccles, W. H., **157**, 3.

Ferrié, G., **154**, 3.

Grosskopf, J., **182**, 3.

Harang, L., **180**, 3.

Herbays, E., **164**, 3; **165**, 3.

Jarkowski, S., **175**, 8.

Malan, D. J., **179**, 3.

Martyn, D. F., **176**, 3.

Mattila, P., **179**, 5.

Norinder, H., **172**, 3.

Sarwate, M. B., **161**, 87.

Van der Toorn, **159**, 3.

Vassy, E., **173**, 3; **175**, 3.

Plasma, Influence on communication with spacecraft, **171**, 39.

Plasmapause and solar wind (W. I. Axford), **174**, 25.

Popov, A. S. Gold Medal, **162**, 15; **164**, 7; **177**, 3; **188**, 20.

Popov Society Meeting, May 1966, **157**, 29.

Popov Society Meeting, May 1968, **167**, 28.

Power standards intercomparison, **150**, 28.

Prize, Appleton (see Awards).

Proton events, Classification, **177**, 37.

#### Publications, announcements and reviews

Physics of upper atmosphere (Rawer), **148**, 26.

Research in geophysics (ed. Odishaw), **148**, 124.

Bibliography, **148**, 21, 124; **149**, 62, 100; **150**, 90; **151**, 159; **153**, 26, 88; **154**, 51; **155**, 68; **156**, 34; **157**, 85; **158**, 69; **159**, 78; **160**, 76; **162**, 76; **163**, 71.

Code of good practice for scientific publications (UNESCO), **149**, 91.

*Annals of IGY*, Vol. 37, **149**, 80.

Towers and masts (Bolt, EBU), **150**, 41; **152**, 22.

Waves in plasma (*Radio Science*), **150**, 41.

Documentation and information centres (UNESCO) **150**, 87.

Ionospheric absorption (Pillet & Moureton), **151**, 59.

Whistlers 1957-63 (Corcuff), **151**, 24.

Wave propagation (Brice), **151**, 18.



- Cavity resonances, ionospheric, **151**, 17.  
VHF propagation over the sea (Nicolis), **151**, 15.  
Mode theory of propagation (*Radio Science*), **151**, 13.  
List of frequencies, ITU (3 ed., 1965), **152**, 106.  
Geomagnetic indices, **152**, 93.  
IAGA publications, **152**, 93.  
*Electronic Letters* (IEE, London), **152**, 13; **171**, 42.  
*Radio Science* (Contents), **155**, 8; **157**, 28; **158**, 46; **159**, 42; **160**, 8; **162**, 13;  
**163**, 30; **164**, 6; **165**, 28.  
Space documentation, **156**, 18.  
Lasers and optics, **156**, 17.  
ITU, **159**, 75.  
Hydromagnetic wave propagation (Dawson 1966), **159**, 41.  
Periodicals in physical sciences, **160**, 71.  
CEI publications, **161**, 90.  
World literature in physics, **164**, 60.  
Abstracting services (1965), **166**, 8.  
Reflex klystron circuits (Berceli, 1967), **166**, 8.  
BIH circulars and reports, **168**, 52.  
*STP Notes*, **168**, 50.  
Depolarisation of EM waves (Beckmann, 1968), **169**, 47.  
*Proc. Astronomical Soc. of Australia*, **169**, 46.  
*Radio Science*, **170**, 59.  
*Annals of IGY*, **170**, 58.  
*Yearbook of International Congress Proceedings 1960-67*, **170**, 56.  
*Yearbook of International Organisations 1968-69*, **170**, 56.  
*Annals of the IQSY*, **166**, 9; **170**, 58; **173**, 35; **175**, 32.  
Synoptic codes (IUWDS) (2nd ed. 1969), **171**, 42.  
Prediction of tropospheric radio transmission (Longley & Rice), **172**, 100.  
Geomagnetic indices 1964-67 (P. N. Mayaud), **172**, 100.  
Theory of EM waves (Ed. Schanda, 1969), **173**, 36.  
Atlas of ionograms (Shapley), **176**, 62.  
Integrated science teaching (P. Richmond, 1971), **179**, 30.  
GARP publications, **177**, 4; **179**, 29; **180**, 32.  
Theory of network tolerances (K. Geher, 1971), **181**, 47.

#### Publications, URSI

- Instructions to authors, **150**, 19.  
*Progress in Radio Science*  
1960-63, **156**, 4.  
1963-66, **162**, 69.  
1966-69, **178**, 66; **181**, 48.  
Elsevier list 1951-56, **160**, 74; **163**, 65.  
*URSI Bulletin*, policy, **186**, 3.  
*Handbook of ionogram interpretation and reduction* (2nd ed), **186**, 18.

Rawer, K. (see Ionosphere : International Reference Ionosphere).

#### Reorganisation of URSI

- IUGG Problems of structure, **178**, 18.

Meeting IUGG/URSI Group : March 1972, **183**, 6.

Meeting URSI Working Group, **178**, 7, 11.

Statement by URSI Board, **178**, 14.

Future structure 1972, **182**, 3.

Individual membership of URSI, **187**, 3.

Progress Report 1973, **188**, 3.

Statement, Commissions I, II, V, VI and VII, **189**, 5.

Rivault, R. (see Commissions : New Results Commission VIII).

#### Satellite

Alouette I and II, **172**, 86.

ATS-F Beacon experiment, **176**, 14.

Beacons, **153**, 15; **181**, 37; **182**, 24; **186**, 18; **187**, 14.

Broadcasting service, **182**, 28.

Optical tracking, **153**, 80.

#### SCAR

Manual 1966, upper atmospheric physics, **159**, 70.

Upper atmospheric physics (Working Group), **168**, 22; **170**, 28.

Scintillation Index (Satellite radio), **168**, 23; **169**, 28; **170**, 61.

Second, CIPM Definition 1970, **177**, 5.

Second, Committee for Definition of (1970), **176**, 47.

Shapley, A. H. (see Ionosphere : Atlas of ionograms).

Shapley, A. H. (see Calendar, International Geophysical : Scientific programme).

Silver, S. (see ICSU and the Unions).

Silver, S. (see Assembly, URSI General — Miscellaneous : General Policy).

Simon, P. (and J. P. Legrand — see Solar flare forecasting).

Sinclair, G. (see Antennas).

Smith-Rose, R. L. (see Assembly, URSI General : Report to ICSU).

Solar flare forecasting (P. Simon and J. P. Legrand), **168**, 34.

Solar flux density (H. Tanaka).

Working Group Report 1966, **159**, 48.

Working Group Report 1968, **169**, 30.

Working Group Report 1969, **174**, 30.

Solar minimum 1964 (C. M. Minnis), **148**, 54.

Sponsorship of Meetings, URSI rules, **175**, 17; **188**, 9.

Standards Laboratories (Working Group), **185**, 3; **186**, 3.

Statutes of URSI (1969), **174**, 14.

Sunspot observations (H. L. de Mastus and P. S. McIntosh), **156**, 20.

#### Symposia, etc.

Microwave Communications, Budapest June 1962, **156**, 6.

Aeronomy, Berkeley Aug. 1963, **152**, 95.

1964.

ULF Electromagnetic fields, Boulder, Aug., **153**, 13.

Radiometeorology, Boulder Sept., **151**, 68.

Microwaves, circuit and information theory, Tokyo Sept., **150**, 35.

Equatorial geophysics, Paris June, **148**, 3.

1965

Electromagnetic theory and antennas, Copenhagen June, **151**, 25.

Fine structure of the atmosphere, Moscow June, **154**, 38; **155**, 61.

Equatorial aeronomy, Sao José dos Campos Sept., **154**, 36, 40.

Density and composition of upper atmosphere, Cambridge Aug., **154**, 46.

Sporadic E layer structure, Boulder June, **149**, 56; **156**, 6.

EM measurements and standards, Boulder Aug., **148**, 15.

Planetary atmospheres and surfaces, Puerto Rico May, **151**, 14; **155**, 10; **157**, 30.

European ionospherists, Brussels March, **159**, 45.

Electromagnetic wave theory, Delft Sept., **153**, 24; **167**, 107.

Calendar of Space conferences (UN), **148**, 35.

1966.

Precision electromagnetic measurements, Boulder June, **149**, 53.

Electron devices, Washington Oct., **152**, 23.

Galactic radioastronomy, Noordwijk Aug., **150**, 80; **153**, 21, **158**, 61.

Microwave communications, Budapest Apr., **152**, 21; **154**, 33; **157**, 11; **168**, 52.

Solar-terrestrial physics, Belgrade Aug., **149**, 28; **152**, 6; **153**, 7; **155**, 4; **159**, 34, 39; **162**, 33.

Neutral and ionized parts of the atmosphere, Vienna May, **162**, 24.

Noctulicent clouds, Tallinn March, **172**, 99.

Events of Feb.-Mar. 1966, St Gallen, Oct., **161**, 82.

1967

International measurements congress, Warsaw July, **156**, 10.

Conjugate points, Boulder June, **156**, 8.

Tests on semiconductors, Budapest Apr., **160**, 30.

Information theory, Debreczen Sept., **160**, 29.

Non-linear oscillations, Prague Sept., **160**, 29.

Electronic measurements and standards, Boulder Aug., **160**, 10.

Upper atmospheric winds, St Gallen Oct., **161**, 40.

Information theory, San Remo Sept., **160**, 27; **161**, 60, **164**, 22.

Standard frequencies and time signals in Europe, Brussels Sept., **162**, 16; **164**, 8.

1968

Network theory, Belgrade Sept., **164**, 27.

Precision electromagnetic measurements, Boulder June, **159**, 45; **164**, 14.

Physics of the magnetosphere, Washington Sept., **165**, 52.

Circuit theory, Prague June, **169**, 24.

Laser measurements, Warsaw Sept., **161**, 40; **162**, 16; **166**, 30; **169**, 11.

URSI and subjects of interest to it, Netherlands, **170**, 11.

Electromagnetic waves, Stresa June, **163**, 39; **165**, 35; **169**, 14; **170**, 57; **171**, 41.

1969

Spectra of meteorological variables, Stockholm June, **168**, 47.

Antenna performance, Boulder July, **170**, 60.

Equatorial aeronomy, Ahmedabad Feb., **171**, 31.

Information theory, Ellenville Jan., **171**, 29.

Planetary atmospheres and surfaces, Woods Hole Aug., **169**, 5; **173**, 23.

Weak magnetic fields, Paris May, **168**, 48; **176**, 64.

1970

Upper atmospheric currents and electric fields, Boulder Aug., **172**, 98.

Solar-terrestrial physics, Leningrad May, **173**, 29.

Microwave communications, Budapest Apr., **176**, 64; **172**, 97.

Semiconductor heterojunctions and layer structure, Budapest Oct., **176**, 57.

Precision electromagnetic measurements, Boulder June, **176**, 14.

Satellite beacon experiments, Lindau June, **176**, 10.

VLB interferometry, Charlottesville Apr., **172**, 96; **176**, 5.

Engineering sciences and research, Paris Sept., **177**, 25.

Information theory, Noordwijk June, **177**, 21.

1971

Earth and planetary physics, Reading March, **176**, 59.

Space and communications, Paris March, **176**, 58.

Microwaves, Stockholm Aug., **175**, 30; **177**, 33.

Rotation of the Earth, Misuzawa May, **175**, 29.

Electromagnetic wave theory, Tbilisi Sept., **177**, 34.

Information theory, Tsakhkadzor Sept., **178**, 50.

Dynamics of thermosphere and ionosphere, Seattle June, **178**, 39.

Waves and resonances in plasmas, St Johns July, **178**, 40; **180**, 25.

Antennas and propagation, Sendai Sept., **172**, 98; **175**, 31; **182**, 32.

1972

Satellite beacon measurements, Graz May, **178**, 63.

Biophysics, Moscow Aug., **179**, 30.

Network theory, Herceg-Novi July, **180**, 9.

Waves and turbulence in stratified layers, San Diego June, **180**, 7.

Antarctic telecommunications, Norway May, **180**, 6.

Equatorial aeronomy, Ibadan Sept., **181**, 45.

Astrophysical data, Charlottesville Nov., **182**, 31.

Lightning sources, Washington Sept., **183**, 37.

1973

Fine structure of precipitation, Nice Oct., **187**, 14; **189**, 17.

Aeronomic processes, Kyoto Sept., **186**, 17.

Teachers for integrated science, Washington Apr., **181**, 45.

Microwaves, Brussels Sept., **183**, 38; **185**, 22; **186**, 23.

Biological effects of microwave radiation, Warsaw Sept., **189**, 18.

Lower ionosphere structure, Konstanz May, **185**, 20.

Dynamics and chemistry in ionosphere, Kyoto Sept., **185**, 20.

Incoherent scatter, Tromsø June, **186**, 17.

Information theory, Tallinn June, **185**, 22.

Geomagnetic disturbances, Kyoto Sept., **185**, 23.

1974

Atmospheric electricity, Garmisch-Partenkirchen Sept., **180**, 9; **183**, 37; **187**, 15.

Electromagnetic wave theory, London July, **186**, 24.

Solar-terrestrial physics, Sao Paulo June, **188**, 19; **189**, 19.

Scattering and emission of radiation from Earth, Berne Sept., **189**, 20.

Beacon satellites, Moscow Sept., **189**, 21.



1975

Electromagnetic compatibility, Montreux May, **189**, 22.

Tanaka, H. (see Solar flux density).

Teaching of physics, **154**, 48; **156**, 32.

Time scales

BIPM, **183**, 33.

CCDS decisions 1964, **149**, 54.

CCDS decisions 1970, **176**, 47.

CCDS decisions 1972, **184**, 87.

CGPM Resolutions 1971, **183**, 33.

Corrections 1955-68, **166**, 35.

Definition of second 1970, **177**, 5.

Frequency offset 1971, **177**, 4.

UTC New definition, **181**, 26.

Time signal emissions, **156**, 10; **179**, 17.

Time steps

UTC 1 Jan. 1972, **181**, 25; **182**, 25.

UTC 1 July 1972, **183**, 37.

UTC 1 Jan. 1974, **189**, 31.

Tropospheric propagation, Report, **172**, 100.

UNESCO

Appointments, **148**, 102; **152**, 103; **160**, 72.

Code of good practice for scientific publications, **149**, 91.

General Conference, 1964, **148**, 110.

International Cooperation Year 1965, **148**, 121.

Message from Director General 1965, **148**, 118.

New administrative structure 1964, **148**, 100.

Report of Director General 1965, **157**, 81.

Units, Adoption of SI, **160**, 16.

URSI

Change in English title, **169**, 4.

History, **170**, 3.

Memorial Lectures, **168**, 3.

Secretariat (address), **168**, 3; **171**, 3; **174**, 82.

van der Pol Gold Medal (see Awards).

WDC-A

Catalogue of data, **149**, 78.

Reorganisation, **157**, 54.

WDC-C2, Catalogue of data, **150**, 30.

Whistlers, URSI Working Group 1969, **174**, 58.

Widdel, H. U. (see Ionosphere : Locations for ionosondes).

WMO

Relations with UN and other international organisations, **163**, 62.

Centenary 1973, **187**, 10.

Wright, J. W. (see Ionosphere : Electron density profile).





